§ 56.5006 Restricted use of chemicals.

The following chemical substances shall not be used or stored except by competent persons under laboratory conditions approved by a nationally recognized agency acceptable to the Secretary.

(a) Carbon tetrachloride.
(b) Phenol,
(c) 4-Nitrobiphenyl,
(d) Alpha-naphthylamine,
(e) 4,4-Methylene Bis (2-chloroaniline),
(f) Methyl-chloromethyl ether,
(g) 3,3 Dichlorobenzidine,
(h) Bis (chloromethyl) ether,
(i) Beta-napthylamine,
(j) Benzidine,
(k) 4-Aminodiphenyl,
(l) Ethyleneimine,
(m) Beta-propiolactone,
(n) 2-Acetylaminofluorene,
(o) 4-Dimethylaminobenzene, and
(p) N-Nitrosodimethylamine.

PHYSICAL AGENTS

§ 56.5050 Exposure limits for noise.

(a) No employee shall be permitted an exposure to noise in excess of that specified in the table below. Noise level measurements shall be made using a sound level meter meeting specifications for type 2 meters contained in American National Standards Institute (ANSI) Standard S1.4–1971, ''General Purpose Sound Level Meters,'' approved April 27, 1971, which is hereby incorporated by reference and made a part hereof, or by a dosimeter with similar accuracy. This publication may be obtained from the American National Standards Institute, Inc. 1430 Broadway, New York, New York 10018, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration.

PERMISSIBLE NOISE EXPOSURES

Duration per day, hours of exposure	Sound level dBA, slow response
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼ or less	115

No exposure shall exceed 115 dBA. Impact or impulsive noises shall not exceed 140 dB, peak sound pressure level.

NOTE: When the daily noise exposure is composed of two or more periods of noise exposure at different levels, their combined effect shall be considered rather than the individual effect on each.

If the sum

$$(C_1/T_1)+(C_2/T_2)+ \ldots (C_n/T_n)$$

exceeds unity, then the mixed exposure shall be considered to exceed the permissible exposure. C_n indicates the total time of exposure at a specified noise level, and T_n indicates the total time of exposure permitted at that level. Interpolation between tabulated values may be determined by the following formula:

$$\text{Log } T=6.322-0.0602\ SL$$

Where T is the time in hours and SL is the sound level in dBA.

(b) When employees' exposure exceeds that listed in the above table, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce exposure to within permissible levels, personal protection equipment shall be provided and used to reduce sound levels to within the levels of the table.

[50 FR 4054, Jan. 29, 1985, as amended at 60 FR 35695, July 11, 1995]

Subpart E—Explosives

SOURCE: 61 FR 36795, July 12, 1996, unless otherwise noted.

§ 56.6000 Definitions.

The following definitions apply in this subpart.

Attended. Presence of an individual or continuous monitoring to prevent unauthorized entry or access.

Barrier. A material object, or objects that separates, keeps apart, or demarcates in a conspicuous manner such as cones, a warning sign, or tape.

Blast area. The area in which concussion (shock wave), flying material, or gases from an explosion may cause injury to persons. In determining the blast area, the following factors shall be considered:

(1) Geology or material to be blasted.

(2) Blast pattern.

(3) Burden, depth, diameter, and angle of the holes.

(4) Blasting experience of the mine.

(5) Delay system, powder factor, and pounds per delay.

(6) Type and amount of explosive material.

(7) Type and amount of stemming.

Blast site. The area where explosive material is handled during loading, including the perimeter formed by the loaded blastholes and 50 feet (15.2 meters) in all directions from loaded holes. A minimum distance of 30 feet (9.1 meters) may replace the 50-foot (15.2-meter) requirement if the perimeter of loaded holes is demarcated with a barrier. The 50-foot (15.2-meter) and alternative 30-foot (9.1-meter) requirements also apply in all directions along the full depth of the hole.

Blasting agent. Any substance classified as a blasting agent by the Department of Transportation in 49 CFR 173.114a(a). This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

Detonating cord. A flexible cord containing a center core of high explosives which may be used to initiate other explosives.

Detonator. Any device containing a detonating charge used to initiate an explosive. These devices include electric or nonelectric instantaneous or delay blasting caps and delay connectors. The term ''detonator'' does not include detonating cord. Detonators may be either ''Class A'' detonators or ''Class C'' detonators, as classified by the Department of Transportation in 49 CFR 173.53, and 173.100. This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

Emulsion. An explosive material containing substantial amounts of oxidizers dissolved in water droplets, surrounded by an immiscible fuel.

Explosive. Any substance classified as an explosive by the Department of Transportation in 49 CFR 173.53, 173.88, and 173.100. This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

Explosive material. Explosives, blasting agents, and detonators.

Flash point. The minimum temperature at which sufficient vapor is released by a liquid to form a flammable vapor-air mixture near the surface of the liquid.

Igniter cord. A fuse that burns progressively along its length with an external flame at the zone of burning, used for lighting a series of safety fuses in a desired sequence.

Laminated partition. A partition composed of the following material and minimum nominal dimensions: ½-inch-thick plywood, ½-inch-thick gypsum wallboard, ⅛-inch-thick low carbon steel, and ¼-inch-thick plywood, bonded together in that order (IME–22 Box). A laminated partition also includes alternative construction materials described in the Institute of Makers of Explosives (IME) Safety Library Publication No. 22, ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' (May 1993), and the ''Generic Loading Guide for the IME–22 Container,'' (October 1993). This incorporation by reference has been approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203, and at all Metal and Nonmetal Mine Safety and Health district offices, or available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., 7th Floor, suite 700, Washington, DC.

Loading. Placing explosive material either in a blasthole or against the material to be blasted.

Magazine. A bullet-resistant, theft-resistant, fire-resistant, weather-resistant, ventilated facility for the storage of explosives and detonators (BATF Type 1 or Type 2 facility).

Misfire. The complete or partial failure of explosive material to detonate

as planned. The term also is used to describe the explosive material itself that has failed to detonate.

Multipurpose dry-chemical fire extinguisher. An extinguisher having a rating of at least 2–A:10–B:C and containing a nominal 4.5 pounds or more of dry-chemical agent.

Primer. A unit, package, or cartridge of explosives which contains a detonator and is used to initiate other explosives or blasting agents.

Safety switch. A switch that provides shunt protection in blasting circuits between the blast site and the switch used to connect a power source to the blasting circuit.

Slurry. An explosive material containing substantial portions of a liquid, oxidizers, and fuel, plus a thickener.

Storage facility. The entire class of structures used to store explosive materials. A ''storage facility'' used to store blasting agents corresponds to a BATF Type 4 or 5 storage facility.

Water gel. An explosive material containing substantial portions of water, oxidizers, and fuel, plus a cross-linking agent.

STORAGE

§56.6100 Separation of stored explosive material.

(a) Detonators shall not be stored in the same magazine with other explosive material.

(b) When stored in the same magazine, blasting agents shall be separated from explosives, safety fuse, and detonating cord to prevent contamination.

§56.6101 Areas around explosive material storage facilities.

(a) Areas surrounding storage facilities for explosive material shall be clear of rubbish, brush, dry grass, and trees for 25 feet in all directions, except that live trees 10 feet or taller need not be removed.

(b) Other combustibles shall not be stored or allowed to accumulate within 50 feet of explosive material. Combustible liquids shall be stored in a manner that ensures drainage will occur away from the explosive material storage facility in case of tank rupture.

§56.6102 Explosive material storage practices.

(a) Explosive material shall be—

(1) Stored in a manner to facilitate use of oldest stocks first;

(2) Stored according to brand and grade in such a manner as to facilitate identification; and

(3) Stacked in a stable manner but not more than 8 feet high.

(b) Explosives and detonators shall be stored in closed nonconductive containers except that nonelectric detonating devices may be stored on nonconductive racks provided the case-insert instructions and the date-plant-shift code are maintained with the product.

§56.6130 Explosive material storage facilities.

(a) Detonators and explosives shall be stored in magazines.

(b) Packaged blasting agents shall be stored in a magazine or other facility which is ventilated to prevent dampness and excessive heating, weather-resistant, and locked or attended. Drop trailers do not have to be ventilated if they are currently licensed by the Federal, State, or local authorities for over-the-road use. Facilities other than magazines used to store blasting agents shall contain only blasting agents.

(c) Bulk blasting agents shall be stored in weather-resistant bins or tanks which are locked, attended, or otherwise inaccessible to unauthorized entry.

(d) Facilities, bins or tanks shall be posted with the appropriate United States Department of Transportation placards or other appropriate warning signs that indicate the contents and are visible from each approach.

§56.6131 Location of explosive material storage facilities.

(a) Storage facilities for any explosive material shall be—

(1) Located so that the forces generated by a storage facility explosion will not create a hazard to occupants in mine buildings and will not damage dams or electric substations; and

(2) Detached structures located outside the blast area and a sufficient distance from powerlines so that the